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April 30, 2013 Reference No. 038443-73

Ms. Leslie Patterson
Remedial Project Manager
United States Environmental Protection Agency
Region V
77 West Jackson Boulevard
Mail Code SR-6J
Chicago, Illinois
60604

Dear Ms. Patterson:

Re: Work Plan for Operable Unit One (OU1) Groundwater and Data Gap Investigation – Phase 1A (Work Plan)
South Dayton Dump and Landfill Site Moraine, Ohio (Site)

This Work Plan presents the proposed approach for the OU1 Phase 1A Groundwater and Data Gap Investigation at the Site. Conestoga-Rovers & Associates (CRA) has prepared this Work Plan on behalf of the Respondents to the Administrative Settlement Agreement and Order on Consent (ASAOC) for Remedial Investigation/Feasibility Study (RI/FS) of the Site, Docket No. V-W-06-C-852 (Respondents).

The Respondents include Hobart Corporation (Hobart), Kelsey Hayes Company (Kelsey-Hayes), and NCR Corporation (NCR). These three Respondents are and have been performing the Work required by the ASAOC under the direction and oversight of the United States Environmental Protection Agency (USEPA).

The activities proposed in the Work Plan constitute a portion of the Remedial Investigation of OU1 at the Site. The objectives of the RI are detailed in Paragraph 9 (a) of the ASAOC as follows:

> *to determine the nature and extent of contamination and any current or potential threat to the public health, welfare, or the environment posed by the release or threatened release of hazardous substances, pollutants or contaminants at or from the Site and to collect sufficient data for developing and evaluating effective remedial alternatives*

The purpose of the OU1 Groundwater and Data Gap Investigation is to complete an investigation of groundwater quality within and surrounding OU1 and to investigate data gaps identified during the completion of previous RI activities at the Site. The work is intended to provide additional data with respect to sources, nature, and extent of contamination that will ultimately be used to determine the most appropriate groundwater containment or mitigation

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options for OU1. CRA will complete the work proposed in this Work Plan in accordance with the USEPA-approved Field Sampling Plan (FSP), Quality Assurance Project Plan (QAPP), and Site-Specific Health and Safety Plan (HASP), and associated addenda CRA previously submitted to USEPA.

This Letter Work Plan is based on the Data Quality Objectives (DQO) table and Data Gap rationale table, which USEPA previously reviewed, and which are provided in Attachments A and B, respectively. There are seven steps in the DQO process. A discussion of the DQO steps for the OU1 Phase 1A Groundwater and Data Gap Investigation is presented in Attachment A. The Respondents have prepared this Work Plan based on discussions between the Respondents, USEPA, Ohio EPA, and CH2M Hill in March and April 2013. This Work Plan incorporates comments received from USEPA on March 12, 2013, and April 10, 2013.

DQO WORK OBJECTIVES

Insufficient information exists to develop and evaluate remedial alternatives that address migration of contaminated groundwater and landfill gas beneath the Site. In order to develop information sufficient for a remedy evaluation and decision, additional information regarding the sources of contamination, and the potential for contaminated groundwater and landfill gas to migrate off Site is required. The Respondents propose to complete a series of phased groundwater investigations, which collectively constitute the OU1 Groundwater and Data Gap Investigation to assist in the development of remedial alternatives to control or mitigate groundwater contamination originating from the Site that is, or has the potential to, migrate off Site, and to further investigate the groundwater contamination identified to date.

The Respondents and USEPA have agreed that a multi-phase approach is appropriate for the OU1 Groundwater and Data Gap Investigation. The general objectives for the phases of work that comprise the OU1 Groundwater and Data Gap Investigations include the following:

Groundwater Investigation:

- ---Collect data to assist in characterizing groundwater impact and select locations for monitoring wells through shallow groundwater Geoprobe investigations and VAS
- Define subsurface stratigraphy, including identifying till-rich zone(s) and sand and gravel aquifer zone(s) at additional locations beneath the Site to a maximum depth of 200 feet (ft) below ground surface (bgs) using Rotosonic drilling
- Install permanent monitoring wells at locations and depth intervals where impacts are identified during the Phased DQO Investigation, and at locations where data gaps exist
- Characterize groundwater chemistry at Site monitoring wells and VAS borings through groundwater sampling and laboratory analysis
- Determine if contaminated groundwater is migrating off-Site

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--The work detailed above will be completed in the following separate phases:

Phase 1A consists of the advancement of soil boreholes, and installation of temporary Geoprobe monitoring wells, and collection of low-flow groundwater samples from the top of the water table to:

- Investigate the nature of groundwater contamination in on-Site areas of concern and delineate the lateral extent of contamination for the purpose of control or mitigation
- Identify the direction of contaminant migration from areas of concern
- Complete further investigation in data gap areas

Phase 1B consists of installation of permanent monitoring wells in select locations based on the Phase 1A analytical results, and collection of groundwater samples to characterize groundwater chemistry and monitor groundwater contamination

Phase 2A consists of VAS investigation to: 1) delineate the vertical extent of known areas of groundwater contamination identified during the Phase 1A and Phase 1B investigations, 2) determine the intervals of greatest contaminant concentrations, and 3) determine where contaminated groundwater is migrating from the landfill.

Phase 2B consists of installation of permanent monitoring wells in select locations based on the analytical results from previous phases, and collection of groundwater samples to characterize groundwater chemistry and monitor groundwater contamination.

Phase 1A, which is the focus of this Work Plan, will include the following tasks:

- Investigate the nature of groundwater contamination in on-Site areas of concern and delineate the lateral extent of contamination for the purpose of control or mitigation
- Identify the direction of contaminant migration from areas of concern
- Delineate the extent of residual non-aqueous phase liquid (NAPL) in the areas of vertical aquifer sampling (VAS) location VAS-04 and soil gas probe GP19-09
- Collect data to assist in selection of monitoring well locations for Phase 1B
- Investigate five total field magnetic anomalies identified during a Geophysical Survey of the Site
- Investigate a geophysical electromagnetic (EM) anomaly identified in the area of test trench TT-21
- Investigate the lateral and vertical extent of chlorobenzene soil contamination near test pit TP-3
- Determine if the Large and Small Ponds are classified as category wetlands

The work tasks identified above that are associated with Phase 1A are discussed below in the following titled sections:

1.0 OU1 Groundwater Areas of Concern / Data Gaps Background
2.0 OU1 Groundwater Investigation Scope of Work
3.0 OU1 Data Gaps Test Trench Investigation
4.0 Wetlands Delineation and Assessment
5.0 Schedule
6.0 Reporting

1.0 BACKGROUND - OU1 GROUNDWATER AREAS OF CONCERN/DATA GAPS

1.1 TT-21/MW-229 TCE

TT-21 and MW-229 are located on Parcel 5054 (see Area 1 on Figure 1), in the vicinity of the approximate location of the Valley Asphalt drum removal in 2000.

The concentration of trichloroethylene (TCE) detected in groundwater samples collected from MW-229 (70 micrograms per liter [µg/L]) was greater than the USEPA Maximum Contaminant Level (MCL) for TCE (5 µg/L). MW-229 was screened from 22 to 32 ft bgs, at 705.3 to 715.3 ft AMSL.

VOC concentrations in soil samples collected from TT-21 (21 ft bgs) were less than USEPA Industrial Soil Regional Screening Levels (RSLs), but greater than non-conservative USEPA soil screening levels (SSLs)[1] for groundwater protection, as follows:

[1] These values are based on USEPA screening levels in soil (SSLs) that are protective of groundwater. USEPA Soil Screening Guidance (SSG) User's Guide (USEPA, July 1996) states:

> *SSLs developed in accordance with this guidance are based on future residential land use assumptions and related exposure scenarios.*
>
> *SSLs are not national cleanup standards. [emphasis from USEPA] SSLs alone do not trigger the need for response actions or define "unacceptable" levels of contaminants in soil.*
>
> *Generally, where contaminant concentrations equal or exceed SSLs, further study or investigation, but not necessarily cleanup, is warranted.*
>
> *SSLs are concentrations of contaminants in soil that are designed to be protective of exposures in a residential setting.*

The use of the SSLs at the Site is conservative and only indicates that there is a potential for contaminants in soil to leach to groundwater. With some exceptions, the entire Site is zoned 'M-2 General Industrial'; therefore, application of SSLs that were designed to be protective of residential exposures is also conservative. CRA understands that USEPA has adjusted these values by using a cancer risk of 1×10^{-4} and a DAF of 10. CRA notes that a DAF of 20 is used in the SSLs and that the SSLs are based on the assumption that the source extends to the water table,

Parameter	*Industrial Soil RSLs (mg/kg)*	*Soil Screening Level (SSL) for Groundwater Protection[1] (mg/kg)*	*Concentration (mg/kg)*
Benzene	5.4	0.026	0.36 J
cis-1,2-DCE	2,000	0.21[2]	1.4
Ethylbenzene	27	7.8	18
TCE	6.4	0.018	0.79 J
Vinyl chloride (VC)	1.7	0.0069	0.49

Notes:

[1] Conservative USEPA risk-based SSLs based on a cancer risk of 10^{-4} and a dilution attenuation factor (DAF) of 10; conservative MCL-based SSLs based on a DAF=10, as specified in USEPA July 7, 2010 comments on the Feasibility Study (FS) prepared by CRA. The least of the conservative risk-based and MCL-based SSL values is presented in this table.

[2] Conservative USEPA SSL for groundwater protection equal to a hazard index of 1, using a DAF=10.

J The parameter was positively identified; however, the associated parameter concentration is estimated.

A sample collected from material in a drum excavated at TT-21 (7 ft bgs) also contained concentrations of benzene (12 milligrams per kilogram [mg/kg]), polychlorinated biphenyl (PCB) Aroclor-1254 (21 mg/kg), lead (2,720 mg/kg), and naphthalene (19 mg/kg), which were greater than the USEPA Industrial Soil RSLs, and non-conservative USEPA SSLs for groundwater protection for benzene (0.21 mg/kg), PCB Aroclor-1254 (8.8 mg/kg), lead (14 mg/kg) and naphthalene (0.47 mg/kg). The Respondents excavated and disposed of the drum and its contents off Site as hazardous waste. The concentrations of naphthalene and PCB Arochlor-1254 in the soil samples collected immediately beneath the drum at 8 ft bgs and the deeper sample collected at 21 ft bgs from TT-21 were less than the Industrial Soil RSLs and SSLs.

1.2 GP18-09/TT-22 VOCS

GP18-09 and TT-22 are located on Parcel 5054 (see Area 2 on Figure 1), in the vicinity of the former location of the Dayton Recycling underground storage tanks (USTs).

i.e., there is no attenuation in the unsaturated zone.

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With the exception of ethylbenzene, VOC concentrations in soil samples collected from TT-22 were less than USEPA Industrial Soil RSLs, but greater than SSLs for groundwater protection, as follows:

Parameter	*Industrial Soil RSLs (mg/kg)*	*Soil Screening Level (SSL) for Groundwater Protection[1] (mg/kg)*	*Concentration (mg/kg)*	
			TT-22 (6 ft bgs)	*TT-22 (21 ft bgs)*
Benzene	5.4	0.026	0.53 J	0.29 J
Ethylbenzene	27	7.8	54	1.5
VC	1.7	0.0069	ND (1.8)	0.061 J

Notes:

[1] Conservative USEPA risk-based SSLs based on a cancer risk of 10^{-4} and a DAF=10; conservative MCL-based SSL based on a DAF=10, as specified in USEPA July 7, 2010 comments on CRA's FS. The least of the conservative risk-based and MCL-based SSLs is presented in this table.

J The parameter was positively identified; however, the associated parameter concentration is estimated.

ND (RDL) Non-detect at the Reporting Detection Limit.

The sample from soil gas probe GP18-09 (located 70 ft north of TT-22) contained the greatest concentration of benzene in soil gas at 14,000 $\mu g/m^3$, and also contained naphthalene (980 $\mu g/m^3$) and VC (4,800 $\mu g/m^3$), which correspond to excess cancer risks greater than 1×10^{-3}. Explosive gas (measured as an equivalent concentration of methane) was detected consistently at concentrations greater than the upper explosive limit (UEL) for methane (15 percent methane) at GP18-09 (20.6 to 26.6 percent methane).

1.3 GP19-09/VAS-04 NAPL PLUME

CRA first encountered evidence of NAPL on November 6, 2008 during installation of VAS-04, on the northeast corner of the B&G Equipment property on Parcel 5171. CRA oversight staff recorded a photo-ionization detector (PID) reading of 235 parts per million (ppm) when screening the soil core from the sample depth corresponding to 24 to 25 ft bgs. The corresponding headspace VOC reading was 600 ppm. CRA field technicians completed a Sudan IV dye test on the soil and observed a red color indicative of the presence of NAPL. CRA encountered water-saturated soil at 27 ft bgs and screened a temporary well from 25 to 30 ft bgs. CRA noted a sheen and strong odor in development water being purged from the well.

In June 2009, CRA advanced eight additional soil borings to assist in characterizing the

horizontal and vertical extent of NAPL identified during the drilling of VAS-04. The locations of the NAPL boreholes and VAS-04 are presented on Figure 1 (see Area 3). During borehole advancement, CRA field technicians screened the soil as per the FSP, and completed a Sudan IV dye test for the presence of NAPL at four-foot intervals. CRA advanced the soil borings to a depth of 2 feet below the water table, or until refusal, to prevent the drawdown of NAPL. CRA identified NAPL in six of eight additional soil borings (boreholes BH01-09, BH02-09, BH04-09, BH05-09, BH07-09, and BH08-09), at a maximum depth of 32 ft bgs. Based on the PID readings, positive and trace readings from the Sudan IV dye tests, and recorded observations of the soil cuttings from the boreholes, CRA concluded that BH04-09 and BH08-09 may have contained light NAPL (LNAPL) but the evidence of its presence was less than in the samples collected from BH02-09 and BH07-09, indicating that CRA advanced BH04-09 and BH08-09 near the boundaries of the LNAPL impact.

CRA installed monitoring well MW-219 in the center of the LNAPL impacts, with the well screen set from 22 to 32 ft bgs. CRA has not observed free-phase LNAPL in MW-219.

The NAPL appears to be present as residual NAPL bound to soil and is not present as a separate phase liquid on the surface of the groundwater.

1.4 GP20-09/TT-23 VOCS

GP20-09 and TT-23 (see Area 4 on Figure 1) are located on Parcel 5171, in the vicinity of the former location of the Custom Deliveries USTs.

Chlorinated solvents were detected in the sample from GP20-09. TCE was detected at concentrations between 16,000 and 56,000 $\mu g/m^3$, which correspond to an excess cancer risk range of 2×10^{-4} to 9×10^{-4}. CRA derived the soil gas criteria excess cancer risks by modifying the USEPA Industrial inhalation RSL carcinogenic target risks to 10^{-4} and applying an attenuation factor of 10 (for shallow soil gas), or 100 (for deep soil gas), using the same methods detailed in Appendix F of the OSWER Vapor Intrusion Guidance (2002). cis-1,2-DCE was detected at a concentration of range of 4,500 to 16,000 $\mu g/m^3$; there is no USEPA industrial air RSL for cis-1,2-DCE.

TCE was detected in a soil sample collected from TT-23 (7 ft bgs) at a concentration (0.031 mg/kg), which is greater than the SSL for groundwater protection for TCE (0.00072 mg/kg), but less than the USEPA Industrial Soil RSL (14 mg/kg). Lead was also detected in the soil sample collected from TT-23 (7 ft bgs) at a concentration (17,700 mg/kg), which was greater than the USEPA Industrial Soil RSL (800 mg/kg) and the SSL (14 mg/kg).

1.5 GP15-09/VAS-08/TT-9 VOCS

GP15-09, VAS-08, and TT-9 are located on Parcel 5172 (see Area 5 on Figure 1).

The soil vapor sample from GP15-09 contained concentrations of cis-1,2-DCE (4,300 μg/m^3), which correspond to a non-cancer hazard index of 122, and TCE (790 μg/m^3) and VC (14,000 μg/m^3), which correspond to excess cancer risks of 3.6 × 10^{-3}, and 5 × 10^{-3}, respectively.

VOC concentrations in groundwater samples collected from VAS-08 were greater than USEPA MCLs, as follows:

Parameter	***USEPA MCL (µg/L)***	***Maximum Concentration (µg/L)***
cis-1,2-DCE	70	87 J
TCE	5	51
VC	2	35

Note:

J The parameter was positively identified; however, the associated parameter concentration is estimated.

Ethylbenzene concentrations in a soil sample collected from TT-9 (22 ft bgs) was greater than USEPA Industrial Soil RSLs. Concentrations of benzene, cis-1,2-DCE, ethylbenzene, TCE, and VC in soil samples collected from TT-9 (7, 17, and 22 ft bgs) were greater than SSLs for groundwater protection, as follows:

Parameter	***Industrial Soil RSLs (mg/kg)***	***SSL for Groundwater Protection[1] (mg/kg)***	***Concentration Range (mg/kg)***		
			TT-9 (7 ft bgs)	***TT-9 (17 ft bgs)***	***TT-9 (22 ft bgs)***
Benzene	5.4	0.026	0.15 J	0.13 J	ND (2.6)
cis-1,2-DCE	2,000	0.21[2]	0.89	0.59 J	0.33 J
Ethylbenzene	27	7.8	15	7	66
TCE	6.4	0.018	0.35 J	0.67 J	0.42 J
VC	1.7	0.0069	0.22 J	0.18 J	ND (2.6)

Notes:

[1] Conservative USEPA risk-based SSLs based on a cancer risk of 10^{-4} and a dilution DAF of 10; conservative MCL-based SSLs based on a DAF of 10, as specified in USEPA July 7, 2010 comments on the FS. The least of the conservative Risk-based and MCL-based SSL values is presented in this table.

[2] Conservative USEPA SSL for groundwater protection equal to a hazard index of 1, using a DAF=10.

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J The parameter was positively identified; however, the associated parameter concentration is estimated.

Based on information presented in the Boesch depositions (February 28 and March 1, 2006), transformers containing were stored in a warehouse building on Parcel 5172, which is occupied by Bullseye Amusements. Mr. Boesch recalled Alcine Grillot working on transformers at the back of that building (page 105 of the December 1, 2011 deposition), and would "walk right outside that building and dump it on the ground" (page 109). CRA will collect groundwater samples from this area for PCB analyses.

1.6 GP13-09/VAS-09

GP13-09 and VAS-09 are located on Parcels 5174 and 5173, respectively (See Area 6 on Figure 1).

The groundwater samples collected from VAS-09 (27-32 ft bgs) contained concentrations of chlorinated solvents that were greater than USEPA MCLs as follows.

Parameter	***USEPA MCL (µg/L)***	***Maximum Concentration (µg/L)***
cis-1,2-DCE	70	3,900 J
TCE	5	5,100
VC	2	760

Note:

J The parameter was positively identified; however, the associated parameter concentration is estimated.

CRA installed MW-215A and MW-215B 6.4 and 6.35 ft east and southeast of VAS-09, respectively. Groundwater samples from MW-215A/B did not contain concentrations of cis-1,2-DCE or TCE greater than USEPA MCLs. Groundwater samples from MW-215B contained concentrations of VC (5.9 µg/L, and 6.2 µg/L), which were greater than the USEPA MCL (2 µg/L), but an order of magnitude less than the VC concentration in the groundwater sample collected from VAS-09.

The soil gas sample collected from GP13-09 contained VC at a concentration of 6,800 $\mu g/m^3$, which corresponds to an excess cancer risk greater than 1×10^{-3}.

Edward Grillot 2012 deposition statements and Exhibit 2 indicate that contents of drums may have been dumped southwest of the TT-10 area.

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1.7 SHALLOW GROUNDWATER INVESTIGATION ALONG SITE BOUNDARY

Under the December 10, 2010 Dispute Resolution Agreement, the Respondents agreed to investigate the shallow groundwater along the Site boundary between VAS-09 and VAS-22 and in the vicinity of monitoring well MW-210. The results of this investigation will be used to identify potential risks to off-Site receptors from VOCs and naphthalene migrating off Site in groundwater and into buildings via the vapor intrusion pathway.

The Dispute Resolution Agreement requires the Respondents to:

> *submit a work plan (Shallow Groundwater Work Plan) including FSP and QAPP Addenda, for additional characterization of the top five feet of shallow groundwater in the vicinity of Monitoring Well 210 (MW-210) at the locations in the Respondents' draft MW-210 Shallow Groundwater Investigation Letter Work Plan, dated March 16, 2010, and at locations no greater than 100 feet apart at the Site boundary starting: 1. adjacent to Dryden Road east of VAS-09; 2. continuing south to the Site boundary at the intersection of Dryden Road and East River Road; 3. continuing west along the south side of the access road to Lot 4610, with a sampling point at the northeast corner of Lot 4610; 4. continuing south along the east boundary of Lot 4610 to Lot 3254 (skipping the Site boundary around Lot 3252); and 5. continuing southwest along the East River Road boundary of the Site to a location east of VAS-22 (Shallow Groundwater Investigation Letter Work Plan). See highlighted area on [Figures 2 and 3], attached, for an illustration of the sampling area. The data quality objectives for the groundwater samples will include, but are not limited to, detecting VOCs and naphthalene in shallow groundwater at the Site boundary that pose more than a 1×10^{-6} cancer risk or a hazard index greater than 1.0 through the vapor intrusion pathway to current or potential future receptors. The samples may be collected using direct push technology, and will be collected using low-flow sampling and groundwater stabilization procedures consistent with those developed for the vertical aquifer sampling previously conducted during RI/FS Work at the Site provided the low-flow sampling and groundwater stabilization procedures meet the data quality objectives required for the VI Study. The sampling intake will be set approximately 2.5 feet below the water table. This Shallow Groundwater Work Plan for additional characterization of groundwater shall be submitted by December 17, 2010.*

The USEPA and the Respondents agreed to revise the Dispute Resolution Agreement groundwater DQO action levels that pose greater than a 1×10^{-6} cancer risk or a hazard index greater than 1.0 through the vapor intrusion pathway. As specified in the DQO table (Attachment A), the groundwater action levels (Action Levels) for the source area investigations include: USEPA MCLs; USEPA Tapwater criteria; concentrations calculated for USEPA RSLs for gas inhalation according to the method in USEPA-approved guidance; and/or cumulative risks and hazards.

1.8 MW-210 – TCE IN GROUNDWATER

The greatest TCE concentrations in groundwater samples collected from any permanent on-Site monitoring well have been consistently detected in the samples collected from MW-210 (see Figure 2). MW-210 is screened between 26 and 36 ft bgs and the well screen is 5 ft below the water table. The TCE concentrations in groundwater samples collected from MW-210 between 1999 and 2009 ranged from 30 to 260 µg/L, greater than the USEPA MCL of 5 µg/L. TCE was also detected at a concentration of 70 µg/L in a groundwater sample collected from MW-229 (see Area 1 on Figure 1) at a well screen depth of 22 to 32 ft bgs. CRA has defined the vertical extent of TCE impacts to 200 ft bgs in groundwater near MW-210 through the analyses of groundwater samples collected from VAS-21 and monitoring wells MW-210, MW-210A, and MW-210B[2].

1.9 TP-3 CHLOROBENZENE

TP-3 is located on Parcel 5177 (see Figure 3). Chlorobenzene was detected in a soil sample collected from TP-3 (16 ft bgs) at a concentration of 560 mg/kg, which is greater than the soil screening value for groundwater protection, and corresponds to a hazard index of 900 based on a DAF of 10. The sample was collected at an approximate elevation of 707.6 ft above mean sea level (AMSL), which was 7.5 ft below the highest recorded water table, as measured on March 7, 2011.

2.0 PHASE 1A - OU1 GROUNDWATER INVESTIGATION SCOPE OF WORK

In order to determine the concentration of shallow groundwater contaminants (i.e., within five feet of the water table) in areas identified as potential source areas on Site and at the Site boundary where contaminants, if present in the shallow groundwater, could result in direct contact or vapor intrusion risks to off-Site receptors, CRA will advance boreholes at horizontal distances no greater than 100 ft as shown on Figures 1 and 2. CRA will advance the boreholes to a minimum of 5 ft below the water table (i.e., 30 ft bgs). CRA will attempt to advance a subset of boreholes (i.e., 1 in 4) deeper to the top of the till layer (where till is present) or a depth of approximately 675 ft AMSL (i.e., 60 ft bgs), which corresponds approximately to the interface between the Upper Aquifer and Lower Aquifer Zones beneath the Site, in order to primarily identify groundwater source areas, and secondarily obtain additional information regarding Upper Aquifer stratigraphy.

CRA will collect a groundwater sample from the top 5 ft of shallow groundwater at each borehole. CRA will collect a minimum of one soil sample from the deepest, unsaturated soil interval of the borehole. Should field screening indicate the possibility of soil contamination

2. CRA has not fully delineated the vertical extent of the deeper vinyl chloride contamination below 200 ft bgs.

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(i.e., visual observations of staining, strong odor, greater than 50 ppm of undifferentiated VOCs based on PID readings) in one or more intervals, CRA will collect one soil sample from each discrete area in addition to the sample from the deepest, unsaturated soil interval.

All borings will be completed using the Geoprobe™ direct push drilling technique. Details regarding Geoprobe™ drilling are provided in Appendix J-F-38 of the FSP.

During borehole advancement, continuous soil cores will be retrieved to log soil stratigraphy. CRA will screen the cores with a PID for the presence of VOCs, and also screen for the presence of methane, either by using a landfill gas meter (such as a Landtec GEM-2000, MultiRAE 4-Gas monitor, or equivalent) or a flame-ionization detector (FID) calibrated for methane.

Where evidence of contamination is identified in a portion of the soil core at a given location, based on the field screening (i.e., elevated PID readings and visual, and/or olfactory observations including sheen), soils will be tested for the presence of NAPL using a Sudan IV® dye test and/or another USEPA-approved shaker test, as appropriate in accordance with the Field Screening of NAPL Standard Operating Procedure (SOP), Appendix J-F-28 of the FSP. CRA will assess the soil samples collected from boreholes installed to delineate LNAPL near VAS-4 using the Sudan IV® dye test.

CRA will collect samples from the depths listed in Attachment B and will analyze the samples for the parameters also listed in Attachment B.

CRA will collect groundwater samples from temporary monitoring wells using a Geoprobe SP16 Groundwater Sampler. The SOP for the Geoprobe SP16 Groundwater Sampler is provided in Appendix J-F-38 of the FSP. The Geoprobe SP16 is a direct push groundwater sampling device that consists of a well screen inside a steel sheath that is driven to the desired sample depth using standard Geoprobe rods. The Geoprobe SP16 is then deployed by retracting the steel sheath and exposing the well screen directly to the formation. The maximum well screen length of the Geoprobe SP16 is 41 inches. Groundwater samples will be collected through the stainless steel screen using a mechanical bladder pump set at a flow rate of 100 millilitres per minute (mL/min) (a peristaltic pump may also be used). The SOP for the mechanical bladder pump is included in Appendix J-F-38 of the FSP.

Chapter 10 of the Ohio EPA Technical Guidance Manual for Ground Water Investigation (May 2012) states groundwater samples collected from monitoring wells may contain noticeable amounts of sediment. If large, immobile particles to which metals are bound are allowed to remain in field-acidified samples, laboratory "total" analyses will overestimate the true concentration of mobile species because acidification dissolves precipitates or causes adsorbed metals to desorb.

Unfiltered groundwater samples collected in 2008 and 2009 from all VAS locations contained concentrations of total arsenic and lead that were greater than RSL MCL criteria. CRA

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proposed to collect filtered groundwater samples in addition to unfiltered groundwater samples (i.e., for both dissolved and total metals analyses). USEPA approved the collection and analyses of the filtered groundwater samples in a conference call on December 3, 2008. CRA collected filtered groundwater samples for dissolved metals (arsenic and lead) analysis from a subset of VAS locations. Concentrations of dissolved (i.e., filtered) metals sampled at all VAS locations were less than the concentrations of total (i.e., unfiltered) metals at all locations, typically by more than an order of magnitude. Concentrations of arsenic and lead in unfiltered samples were less than RSL MCL criteria, with the exception of dissolved arsenic concentrations from two locations. Accordingly, for this Work Plan, CRA proposes collection of unfiltered VOC groundwater samples in order to prevent aeration and loss of volatile analytes. Based on previous Site investigations, CRA proposes collection of filtered groundwater samples for all other parameters (i.e., PCBs, naphthalene, metals, etc.) for this Work Plan.

For Quality Assurance/Quality Control (QA/QC) purposes, CRA will submit one field duplicate for analyses for every 10 soil or groundwater samples analyzed. Based on the total expected number of groundwater samples to be collected during borehole advancement, CRA will submit nine field duplicate groundwater samples, and two field duplicate soil samples. CRA will also submit one trip blank sample per shipment for VOC analyses in accordance with the QAPP.

The OU1 Source Area Groundwater Investigation will also include the collection of a groundwater sample from the water supply well located 500 ft downgradient of MW-210. The well is located at 2447 East River Road. CRA previously provided the sampling protocols for this well to USEPA in an SOP as an attachment to a letter dated January 13, 2012. CRA will collect a groundwater sample from this water supply well via a tap, if present. CRA will confirm with a representative from 2447 East River Road that the water from the tap is not altered by any method including water treatment devices (i.e., water softeners, filtration units, ultraviolet light, reverse osmosis, distillers, chlorinators, etc.), and therefore, is representative of the groundwater in the aquifer in which the water supply well is screened. If water treatment devices are present and a sample cannot be collected from a tap or other location upstream of any such devices, CRA will, if feasible, collect a groundwater sample directly from the water supply well using a bladder pump. The SOP for the bladder pump is included in Appendix J-F-38 of the FSP. CRA will submit the groundwater sample from the water supply well for TCL VOCs, naphthalene, and metals analyses.

CRA will evaluate the results of the OU1 source area groundwater investigation to remove data gaps; identify areas of concern; determine which specific areas may require active remediation; and to assist with the selection and design of the remedial strategy for OU1 groundwater during the OU1 Remedial Design (RD) or define the extent of contamination as part of the OU2 RI, whichever is completed sooner. CRA will evaluate the OU1 data gaps groundwater results by comparing groundwater sample concentrations to USEPA MCLs, USEPA RSLs for tap water, and/or concentrations calculated from USEPA RSLs for gas inhalation. The data gaps and proposed investigation locations are summarized in Attachment B.

Following completion of Phase 1A of the OU1 source area groundwater investigation, the

Respondents will summarize the resultant data into tabular form and databox figures. The Respondents will also prepare figure(s) presenting proposed permanent monitoring well locations and a corresponding rationale table detailing proposed additional investigative locations, permanent monitoring wells and corresponding screened intervals, soil vapor investigation[3], or remediation required in order to further define or mitigate excess risks posed by contaminants in shallow groundwater in the investigated areas. CRA will submit the files to USEPA for review and discussion.

The Respondents will complete additional investigation deemed necessary based on the results of the OU1 Source Area Groundwater Investigation on an expedited basis outside of the OU2 Remedial Investigation process unless otherwise agreed between the Respondents and USEPA. Following USEPA approval of the locations and installation details, CRA will install permanent monitoring wells to confirm source areas, monitor for suspected LNAPL, and monitor downgradient contaminant migration, where appropriate (i.e., near the Site boundary).

Each of the groundwater data gap areas discussed above will be investigated during Phase 1A, as detailed in the subsections below.

2. 1 AREA 1 - TT-21/MW-229 TCE AND PCBS

The Respondents propose to complete additional investigation to delineate TCE groundwater contamination in the vicinity and upgradient of MW-229, and determine the potential presence and extent of PCB soil and groundwater contamination from TT-21 excavated drum contents. CRA will advance 11 boreholes on Site in the vicinity of MW-229 and TT-21. Area 1 on Figure 1 presents the approximate locations of the proposed boreholes around MW-229 and TT-21. CRA will advance the boreholes to a minimum of 5 ft below the water table (i.e., 30 ft bgs). CRA will attempt to advance a subset of boreholes (i.e., 1 in 4) deeper to the top of the till layer (where till is present) or a depth of approximately 675 ft AMSL (i.e., 60 ft bgs), which corresponds approximately to the interface between the Upper Aquifer and Lower Aquifer Zones beneath the Site, in order to primarily identify groundwater contamination source areas, and secondarily obtain additional information the limits of waste in this area. If the limit of waste is not reached to a depth of approximately 675 ft AMSL, CRA will attempt to advance the borehole(s) deeper, if possible.

CRA will collect an unfiltered groundwater sample from the top 5 ft of shallow groundwater at each borehole for VOC analyses. CRA will collect filtered groundwater samples for metals, PCB, and naphthalene[4] analyses from 1 in every 4 locations, in order to determine possible

[3] The need for a soil vapor investigation will be based on Phase 1A groundwater results, Phases 1B and 2B permanent monitoring well groundwater samples compared to the USEPA Vapor Intrusion Screening Level (VISL) Calculator. The USEPA VISL Calculator provides screening level concentrations for groundwater based upon default residential or non-residential exposure scenarios, a target cancer risk level of one per million (10^{-6}) and a target hazard quotient of one for potential non-cancer effects.
[4] Naphthalene will be analyzed as a VOC parameter, and therefore will be unfiltered.

metals and naphthalene contamination from the drum excavated at TT-21.

The Respondents will collect soil samples for VOC analysis from all Area 1 boreholes, and for PCB analysis from two boreholes completed near TT-21, in accordance with the soil sample collection criteria specified in Section 2.0.

2.2 AREA 2 - GP18-09/TT-22 VOCS

The Respondents propose to complete additional investigation in the vicinity of GP18-09/TT-22 to determine the concentrations of VOCs in shallow groundwater have been contaminated by soil, and to determine if potential groundwater contamination is the source of VOCs in soil vapor detected in samples from GP18-09.

CRA will advance five boreholes on Site in the vicinity of TT-22 and GP18-09. Area 2 on Figure 1 presents the approximate locations of the proposed boreholes around GP18-09 and TT-22. CRA will advance the boreholes to a minimum of 5 ft below the water table (i.e., 30 ft bgs). CRA will attempt to advance all five boreholes deeper to the top of the till layer (where till is present) or a depth of approximately 675 ft AMSL (i.e., 60 ft bgs), which corresponds approximately to the interface between the Upper Aquifer and Lower Aquifer Zones beneath the Site, in order to primarily identify groundwater source areas, and secondarily obtain additional information regarding the limits of waste in this area. If the limit of waste is not reached to a depth of approximately 675 ft AMSL, CRA will attempt to advance the borehole(s) deeper, if possible.

CRA will collect an unfiltered groundwater sample from the top 5 ft of shallow groundwater at each borehole for VOC analyses. CRA will also collect a soil sample from each borehole in --Area 2 for VOC analyses, in accordance with the soil sample collection criteria specified in Section 2.0.

2.3 AREA 3 - GP19-09/VAS-04 NAPL PLUME

The Respondents propose to delineate the extent of residual LNAPL in the areas of BH04-09 and BH08-09 by advancing five Geoprobe boreholes in the vicinity of GP19-09/VAS-04, as shown on Figure 1 (Area 3). Additional details regarding Geoprobe drilling are provided in the Appendix J-F-38 of the FSP.

CRA will advance the boreholes to a minimum of 5 ft below the water table (i.e., 30 ft bgs). To prevent potential draw-down of LNAPL to deeper depths where it may not be present, CRA will advance the boreholes to a maximum depth of 10 ft below the water table. CRA will collect a groundwater sample from the top 5 ft of shallow groundwater at each borehole. CRA does not propose soil sample collection from the boreholes in the vicinity of GP19-09/VAS-04 (Area 3).

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CRA will collect groundwater samples for VOCs (unfiltered), total petroleum hydrocarbon (TPH) (unfiltered), metals (filtered), and naphthalene analyses from the two boreholes located closest to the Site boundaries (i.e., north and east). CRA will collect groundwater samples from the two proposed boreholes, one located to the north of GP19-09/VAS-04 and one located to the east, in order to determine if contaminants in the GP19-09/VAS-04 area are migrating off-Site towards the Great Miami River (GMR) or neighboring properties, respectively.

In locations where LNAPL is identified, CRA will step out approximately 40 ft from those locations and advance additional boreholes. CRA may install additional permanent monitoring wells in Phase 1B of the Groundwater Investigation, based on the results of this Phase 1A investigation.

As discussed between USEPA and the Respondents during the March 6, 2013 conference call, the Respondents will complete bail-down testing at MW-219 and a solubility assessment to determine if residual LNAPL is bound to soil or may be present as a separate phase liquid on the groundwater surface.

A bail-down test will draw down the water level in the monitoring well. The purpose of the bail-down test is to determine if NAPL that may be present just at or beneath the water table may flow into the monitoring well. CRA will use a pump for the bail-down test, in order to achieve appreciable drawdown.

2.4 AREA 4 - GP20-09/TT-23 VOCS

The Respondents propose to advance six boreholes in the vicinity of GP20-09 and TT-23 to investigate the possibility that a source of chlorinated solvents may be present in soil or groundwater in the vicinity of GP20-09 and TT-23. --Area 4 on Figure 1 presents the approximate locations of the proposed boreholes near GP20-09 and TT-23. CRA will advance the boreholes to a minimum of 5 ft below the water table (i.e., 30 ft bgs). CRA will attempt to advance one of the boreholes deeper to the top of the till layer (where till is present) or a depth of approximately 675 ft AMSL (i.e., 55 ft bgs), which corresponds approximately to the interface between the Upper Aquifer and Lower Aquifer Zones beneath the Site, in order to primarily identify groundwater source areas, and secondarily, to obtain additional information regarding the limits of waste in this area. If the limit of waste is not reached to a depth of approximately 675 ft AMSL, CRA will attempt to advance the borehole(s) deeper, if possible.

CRA will collect an unfiltered groundwater sample from the top 5 ft of shallow groundwater in each borehole for VOC analyses. CRA will collect a soil sample from each borehole in Area 4 for VOC analyses, in accordance with the soil sample collection criteria specified in Section 2.0.

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2.5 AREA 5 - GP15-09/VAS-08 / TT-9 VOCS AND PCBS

The Respondents propose to advance 18 boreholes in the vicinity of GP15-09, VAS-08, and TT-9 to determine the possibility of additional sources of VOCs and PCBs, and provide additional delineation. Area 5 on Figure 1 presents the approximate locations of the proposed boreholes near GP15-09, VAS-08, and TT-9. CRA will advance the boreholes to a minimum of 5 ft below the water table (i.e., 30 ft bgs). CRA will attempt to advance a subset of the boreholes (i.e., 1 in 4) deeper to the top of the till layer (where till is present) or a depth of approximately 675 ft AMSL (i.e., 60 ft bgs), which corresponds approximately to the interface between the Upper Aquifer and Lower Aquifer Zones beneath the Site, in order to primarily identify groundwater contamination source areas, and secondarily obtain additional information regarding the limits of waste in this area. If the limit of waste is not reached to a depth of approximately 675 ft AMSL, CRA will attempt to advance the borehole(s) deeper, if possible.

CRA will collect an unfiltered groundwater sample from the top 5 ft of shallow groundwater at each borehole for VOC analyses. CRA will collect filtered groundwater samples for PCB analyses from 1 in every 4 locations to determine possible contamination from reported transformer disposal on Parcel 5172, -CRA will collect a soil sample from each borehole in Area 5 for VOC analyses, in accordance with the soil sample collection criteria specified in Section 2.0. CRA will collect a soil sample from 1 in every 4 boreholes for PCB analysis. Samples for PCB analysis in soil and groundwater will be collected from boreholes located near the area of reported transformer disposal on Parcel 5172.

2.6 AREA 6 - GP13-09/VAS-09

The Respondents propose to advance 15 boreholes in the vicinity of GP13-09 and VAS-09 to determine the possibility of a source of chlorinated VOCs, and investigate information from the Edward Grillot 2012 deposition regarding possible dumping of drum contents in this area. Area 6 on Figure 1 presents the approximate locations of the proposed boreholes near GP13-09, VAS-09, and TT-10. CRA will advance the boreholes to a minimum of 5 ft below the water table (i.e., 30 ft bgs). CRA will attempt to advance a subset of the boreholes (i.e., 1 in 4) deeper to the top of the till layer (where till is present) or a depth of approximately 675 ft AMSL (i.e., 56 ft bgs), which corresponds approximately to the interface between the Upper Aquifer and Lower Aquifer Zones beneath the Site, in order to primarily identify groundwater contamination source areas, and secondarily obtain additional information regarding the limits of waste in this area. If the limit of waste is not reached to a depth of approximately 675 ft AMSL, CRA will attempt to advance the borehole(s) deeper, if possible.

CRA will collect an unfiltered groundwater sample from the top 5 ft of shallow groundwater at each borehole for VOC analyses. CRA will collect filtered groundwater samples for naphthalene and metals analyses from 1 in every 4 locations, in order to determine possible metals and naphthalene contamination observed in the vicinity of VAS-09. - CRA will collect soil samples for VOC analyses , in accordance with the soil sample collection criteria specified in Section 2.0.

2.7 MW-210 – TCE IN GROUNDWATER

The Respondents propose to complete additional investigation in the vicinity of MW-210 to determine the concentrations of VOCs and naphthalene in shallow groundwater to determine if the groundwater concentrations at the investigated locations are greater than USEPA MCLs, USEPA Tapwater criteria, or concentrations calculated from USEPA RSLs for gas inhalation. Additionally, the Respondents propose to determine TCE concentrations in shallow groundwater in the vicinity of MW-210 to evaluate possible sources of the shallow TCE contamination detected in groundwater samples collected from MW-210. In accordance with USEPA comment 8a, dated March 12, 2013, the OU1 Phase 1A investigation will start with the MW-210 area boreholes.

CRA will advance eight boreholes to the south and east of the MW-210 monitoring well nest at an initial distance interval of 20 ft along the southern fence line. To the north of the MW-210 monitoring well nest, CRA will advance three boreholes at an initial distance interval of 40 ft. CRA will advance 18 boreholes on-Site along the Site boundary in accordance with the Dispute Resolution Agreement. CRA will advance the boreholes to a minimum of 5 ft below the water table (i.e., 30 ft bgs). CRA will attempt to advance a subset of boreholes (i.e., 1 in 4) deeper to the top of the till layer (where till is present) or a depth of approximately 675 ft AMSL (i.e., 60 ft bgs), which corresponds approximately to the interface between the Upper Aquifer and Lower Aquifer Zones beneath the Site, in order to primarily identify groundwater contamination source areas, and secondarily obtain additional information regarding the limits of waste in this area. If the limit of waste is not reached to a depth of approximately 675 ft AMSL, CRA will attempt to advance the borehole(s) deeper, if possible.

CRA will collect a groundwater sample from the top 5 ft of shallow groundwater at each borehole for VOC (unfiltered) analyses. CRA will collect groundwater samples for metals (filtered) and naphthalene analysis from every 1 in 4 locations. CRA does not propose soil sample collection from the boreholes in the vicinity of MW-210. Figure 2 presents the approximate locations of the proposed boreholes near MW-210. If the upgradient borehole locations fail to identify a source of contaminants at MW-210, additional boreholes may be required in Phase 1B.

2.8 TP-3 CHLOROBENZENE

The Respondents proposes to advance four additional Geoprobe boreholes in the vicinity of TP-3 on Parcel 5177 to investigate the horizontal and vertical extent of chlorobenzene impacts in soil near TP-3, and the potential pathway of chlorobenzene leaching from soil to groundwater. CRA will advance the boreholes to a minimum of 5 ft below the water table (i.e., 30 ft bgs). CRA will attempt to advance the boreholes deeper to the top of the till layer (where till is present) or a depth of approximately 675 ft AMSL (i.e., 50 ft bgs), which corresponds approximately to the

interface between the Upper Aquifer and Lower Aquifer Zones beneath the Site, in order to primarily identify groundwater contamination source areas, and secondarily obtain additional information regarding the limits of waste in this area. If the limit of waste is not reached to a depth of approximately 675 ft AMSL, CRA will attempt to advance the borehole(s) deeper, if possible.

CRA will collect a groundwater sample from the top 5 ft of shallow groundwater observed in each borehole. The proposed borehole locations are presented on Figure 3. In accordance with the previous specifications, the Respondents propose to collect soil and unfiltered groundwater samples from each borehole in the vicinity of TP-3 for VOC analyses, in accordance with the sample collection criteria specified in Section 2.0.

CRA will complete this portion of the investigation early on, in order to obtain data expeditiously, which will allow for the collection of additional samples should this be required.

3.0 OU1 DATA GAPS TEST TRENCH INVESTIGATION

CRA completed a geophysical investigation in 2008. The Geophysical Investigation identified numerous anomalies at the Site. Some areas of the Site were not included in the geophysical survey due to the presence of physical obstructions or cultural interferences. In some cases, the geophysical anomalies may extend onto unsurveyed areas.

The EM 61 geophysical survey results indicated that the majority of the central portion and Dryden Road parcels of the Site (i.e., Parcel 5177, Parcels 5173, 5174, 5175, and 5176) were characterized by anomalous fill and waste, including suspected fly ash, slag, foundry sand, reinforced concrete, and/or buried metal objects. The magnetic anomalies detected on Parcel 5177 are likely associated with former access roads, air curtain destructor infrastructure, and buried metal waste.

CRA identified a geophysical anomaly in close proximity to TT-21 on Parcel 5054. While a number of drums have been removed from this area, the presence of the geophysical anomaly and observations of drums or drum carcasses present in the sidewalls of the excavation completed in 2000 indicate that drummed wastes may remain at this location. See Figure 3 for locations.

CRA identified a geophysical anomaly in close proximity to TT-23 on Parcel 5171, which is the approximate location where a UST was removed from the former Custom Deliveries facility. The geophysical anomaly is believed to be the concrete base to which a UST was historically secured. According to the Underground Storage Tank Closure for Custom Deliveries, Inc. at 1951 Dryden Road, Moraine, Ohio report prepared by Associated Environmental, Inc., the concrete base was left in place at the time that Custom Deliveries removed the UST.

CRA identified additional geophysical anomalies in the following areas:

- Approximately 100 ft southwest of VAS-09 and 200 ft west of GP13-09, on Parcel 5177
- Approximately 200 ft southeast of TP-3, on Parcel 5177
- Approximately 150 ft northwest of MW-225, on Parcel 5171
- Approximately 360 ft north of MW-225, on Parcel 5171

The locations of the geophysical anomalies are shown on Figure 3. CRA proposes excavation of test trenches in these areas to investigate the nature of these anomalies.

3.1 SCOPE OF THE OU1 DATA GAPS TEST TRENCH INVESTIGATION

Test trenches are proposed in locations where the Respondents would like to investigate geophysical anomalies identified at the Site. CRA will visually identify and record the nature and depth of fill material above the water table. The Respondents will use this information to verify the limits of fill and to assist in characterizing the nature of the landfilled materials present in the areas investigated.

CRA will complete excavations to the top of the water table, where possible (as limited by the ability of the excavator to reach the top of the water table, the stability of the walls of the excavation, and/or the presence of obstructions). If CRA encounters an obstruction during the excavation of a test trench, CRA will adjust the location of the trench to avoid the obstruction. If excavation to the water table is not possible due to the depth of the water table or the stability of the fill material, the Respondents will consider the need for additional investigation at the location in question during future investigation work. CRA will assess the potential impacts from saturated fill materials as part of the groundwater investigation described above.

CRA will excavate the test trenches in the locations shown on Figure 3. Each test trench will be approximately 30 feet long by 3 feet wide, and will extend to the water table (if this depth can be excavated to safely). CRA will determine the vertical limit of fill material by the presence of undisturbed native soil in the excavation. CRA will also note if fill material appears to consist of re-located spoil from gravel extraction operations versus undisturbed native soil. Test trench excavation will continue in these areas to the depth of native material or the maximum reach of the excavator, whichever is less. CRA will visually identify and record the nature and depth of the fill. The procedures and equipment to be used to excavate trenches and visually characterize the fill are described in Appendix J-C of the FSP.

4.0 WETLANDS DELINEATION AND ASSESSMENT

The Respondents propose to complete a wetland delineation and assessment for the Large and Small Pond areas. CRA will request a Jurisdictional Determination (JD) from the U.S. Army

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Corps of Engineers (USACOE) to determine any Federal or State jurisdiction over these areas. The USACOE is the lead agency for conducting JDs in Ohio.

The appropriate jurisdictional authority over a wetland or water body in Ohio is determined by obtaining a JD and is dependent on whether the wetland is hydrologically isolated or is hydrologically connected to or adjoining Traditionally Navigable Waters of the U.S. (TNW). The USACOE regulates wetlands and water bodies that are hydrologically connected to or adjacent to TNW under Section 404 of the Clean Water Act (CWA). Typically, the USACOE does not have jurisdiction over isolated wetlands. However, they can assert jurisdiction if the isolated wetlands are adjacent to a TNW and a significant nexus exists between the isolated wetlands and an adjacent TNW. The Ohio EPA regulates isolated wetlands under their isolated wetland regulatory program that are otherwise not regulated by the USACOE.

CRA will complete a wetland delineation to determine if the Large and Small Pond Areas are isolated or not. If the Large and Small Pond Areas are isolated and determined not to be Jurisdictional Waters of the U.S., then CRA will assess these areas in accordance with Ohio EPA methodologies (ORAM 5.0) to determine their resource value classification (i.e., Category 1, 2, or 3 wetlands). The Category of an isolated wetland (Category 1, 2, or, 3) influences the permitting standards and mitigation requirements under Ohio EPA requirements.

For Superfund sites, the Ohio EPA requires that remediation that adversely affect a wetland under their jurisdiction comply with the substantive requirements of OAC-3745-1-54 for wetland anti-degradation. The USACOE may require a permit (Nationwide Permit 38) if these wetlands fall under their jurisdiction or require substantive compliance with the USACOE permitting standards. If the wetland survey concludes that the Large Pond and Small Pond are regulated wetlands by either Ohio EPA or the USACOE, then the agency with jurisdiction would require compensatory wetland mitigation in accordance with their regulations and policies for any wetlands destroyed during remediation. The wetland mitigation requirements will be determined following completion of the wetland delineation, JD, and assessment in accordance with USACOE or Ohio EPA guidance, as applicable.

5.0 SCHEDULE

CRA will commence field work within two weeks of receipt of USEPA approval of the Work Plan, dependant on Geoprobe drilling subcontractor availability. The schedule for the OU1 Groundwater and Data Gap Investigation is presented in Attachment C.

CRA plans to use a single excavator to complete the test trenching; however, a second excavator and field crew will be added if scheduling constraints so dictate.

The Respondents will provide USEPA with verbal notification of field work at least 14 calendar days in advance of their initiation.

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April 30, 2013 Reference No. 038443-73

If significant changes or modifications to the proposed scope of work presented herein are required, CRA will contact USEPA for approval prior to implementing the changes, unless the changes are required for emergency or safety-related reasons.

6.0 REPORTING

CRA will post the validated analytical results to the South Dayton Dump and Landfill ftp site upon validation. CRA will also post stratigraphic information to the ftp site as soon as it is compiled from the field notes. The Respondents will summarize results and propose locations for additional phases of the Groundwater Investigation in accordance with the schedule presented in Attachment C. The monthly progress reports required by the ASAOC will include information about this investigation.

CRA will summarize and present the Phase 1A Groundwater investigation results Phase 1A Groundwater Investigation Summary Report. The draft report will include a description of the field work completed, any deviations from this Work Plan and the rationale behind the change, photographs, stratigraphic logs, field sampling data sheets, analytical summary tables, and analytical data reports. The draft report will include proposals and rationale for the Phase 1B (Monitoring well installation) and Phase 2A (Vertical Aquifer Sampling) investigations. CRA will finalize the report following receipt of comments from USEPA. The Phase 1A Groundwater Investigation Summary Report is anticipated to be submitted to USEPA and Ohio EPA in August 2013, in accordance with the schedule.

Should you have any questions on the above, please do not hesitate to contact us.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Stephen M. Quigley

VC/cb/8
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